

No.

9800247

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DEKALB Genetics Corporation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

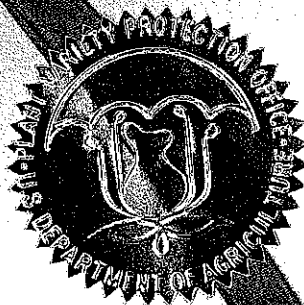
AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW, IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'CX284c'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of February, in the year of our Lord two thousand one.



Attest:

Alank Post

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

[Signature]

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
DEKALB Genetics Corporation		EX728	CX284c
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9800247
3100 Sycamore Road DeKalb, IL 60115		(815) 758-3461	
6. FAX (include area code)		7. GENUS AND SPECIES NAME	8. FAMILY NAME (Botanical)
(815) 758-4106		Glycine max L. Merr.	Leguminosae
9. CROP KIND NAME (Common name)		10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)	
Soybean		Corporation	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
Delaware		June 15, 1988	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS		14. TELEPHONE (include area code)	
R. Mark Lawson Tim Kain Jfd 8 Sept 2000 DEKALB Genetics Corporation 3100 Sycamore Road DeKalb, IL 60115		(815) 758-3461	
15. FAX (include area code)		16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)	
(815) 758-4106		<input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository) <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)	
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)			
<input type="checkbox"/> YES If "yes," answer items 18 and 19 below <input checked="" type="checkbox"/> NO If "no," go to item 20			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?			
<input checked="" type="checkbox"/> YES If "yes," give names of countries and dates <input type="checkbox"/> NO			
U.S. Jan. 98			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.			
The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
R. Mark Lawson			
NAME (Please print or type)		NAME (Please print or type)	
R. Mark Lawson			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director Research	8-4-98		

Origin and Breeding History
CX284c

CX284c is a late-Group II variety derived from the cross CX340c² x CX259.

Winter 1990-91	The cross CX340c x CX259 was made.
Summer 1991	The cross CX340c(CX340c x CX259) was made.
Winter 1991-92	F1 generation was grown (range 1, row 43). F2 generation was grown (range 43, rows 1-15).
Summer 1992	F3 generation was grown (range 610, rows 29-40 through range 611, rows 1-28).
Summer 1993	F4 generation was grown. Range 800, row 26 was selected.
Winter 1993-94	F5 generation was grown.
Summer 1994	F6 generation was grown.
Summer 1995	F7 generation was grown.
Summer 1996	F8 generation was grown.
Winter 1996-97	F9 generation was grown.
Summer 1997	F10 generation was grown.
Spring 1998	F11 generation was released as CX284c.

Statement of Stability and Uniformity

Soybean variety CX284c has been judged to be uniform for breeding use and testing after four (4) generations of selfing. CX284c was reproduced and judged uniform and stable for an additional seven (7) generations.

Statement of Variants

CX284c shows no variants other than what would normally be expected due to environment or that would occur for almost any characteristic during the course of repeated sexual reproduction.

2

Novelty Statement

DEKALB Genetics Corporation believes that CX284c is most similar to soybean variety CX297, except for the following traits: CX284c has white flowers, is resistant to Soybean Cyst Nematode Race 3 and has normal tolerance to sulfonylurea herbicides whereas, CX297 has purple flowers, is susceptible to Soybean Cyst Nematode Race 3 and has enhanced tolerance to sulfonylurea herbicides.

28 MAY -2 1998

0204-242-2420
REC-177

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY

Soybean Variety CX284c
Experimental Name: EX728

APPLICANT: DEKALB Genetics Corporation 3100 Sycamore Road DeKalb, IL 60115
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1. **SEED SHAPE:** (1) Spherical
2. **SEED COAT COLOR: (Mature Seed)** (1) Yellow
3. **SEED COAT LUSTER: (Mature Hand Shelled Seed)** (1) Dull
4. **SEED SIZE: (Mature Seed)** 17.5g/100 seed
5. **HILUM COLOR: (Mature Seed)** (6) Black
6. **COTYLEDON COLOR: (Mature Seed)** (1) Yellow
7. **SEED PROTEIN PEROXIDASE ACTIVITY:** (2) High
8. **SEED PROTEIN ELECTROPHORETIC BAND:** -
9. **HYPOCOTYL COLOR:** (2) Green with Bronze Band
10. **LEAFLET SHAPE:** (3) Ovate
11. **FLOWER COLOR:** (1) White
12. **POD COLOR:** (1) Tan
13. **PLANT PUBESCENCE COLOR:** (3) Tawny
14. **PLANT HABIT:** (3) Indeterminate
15. **MATURITY GROUP:** (5) II₁ W₁ A₁ E₁ G₁ S₁ V₁
16. **MATURITY SUBGROUP:** (8)

020V- PWD-5460
BFL

EXHIBIT C

CX284c

Page two.

2800247

17. DISEASE REACTION:**(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Tolerant)****Bacterial Diseases:**

Bacterial Pustule: 0
Bacterial Blight: 0
WildfireBlight: 0

Fungal Diseases:

Brown Spot: 0
Frogeye Leaf Spot
Race 1: 0 Race 2: 0 Race 3: 0
Race 4: 0 Race 5: 0 Race 6: 0
Other: 0
Target Spot: 0
Downy Mildew: 0
Powdery Mildew: 0
Brown Stem Rot: 2
Stem Canker: 0
Pod and Stem Blight: 0
Purple Seed Stain: 0
Rhizoctonia Root Rot: 0
Phytophthora Root Rot (1)
Race 1: 0 Race 2: 0 Race 3: 0 Race 4: 0
Race 5: 0 Race 6: 0 Race 7: 0 Race 8: 0
Race 9: 0 Race 10: 0 Race 11: 0 Race 12: 0
Race 13: 0 Race 14: 0 Race 15: 0 Race 16: 0
Race 17: 0 Race 18: 0 Race 19: 0 Race 20: 0
Race 21: 0 Race 22: 0 Race 23: 0 Race 24: 0
Race 25: 0 Race 26: 0 Other: 0

Viral Diseases:

Bud Blight: 0
Yellow Mosaic: 0
Cowpea Mosaic: 0
Pod Mottle: 0
Seed Mottle: 0

020V-VMS-BALD
HFC-107

EXHIBIT C

CX284c

Page three.

9800247

Nematode Diseases:**Soybean Cyst Nematode**

Race 1: 1 Race 2: 0

Race 6: 0 Race 9: 0

Lance Nematode: 0

Southern Root Knot Nematode: 0

Northern Root Knot Nematode: 0

Peanut Root Knot Nematode: 0

Reniform Nematode: 0

Other: 0

Race 3: 2 Race 5: 0

Race 14 (formerly Race 4): 0

20. PHYSIOLOGICAL RESPONSES:

Iron Chlorosis on Calcareous Soil:

1 (DEKALB's score is 5; scale 1-9, 1=most resistant)

Other:

0

21. INSECT REACTION:

Mexican Bean Beetle: 0

Potato Leaf Hopper: 0

Other: 0

22. HERBICIDE RESISTANCE:

Metribuzin: 0

Sulfonyleurea: 3

Roundup: 0

Other: 0

ADDITIONAL INFORMATION

In 1997, CX284c was tested in the greenhouse at the University of Arkansas on soybean cyst nematode Race 3 infested soil. It was rated resistant. It was also tested by Iowa State University in replicated field trials and was rated resistant. This confirmed DEKALB field observations of resistance to soybean cyst nematode Race 3.

0200-10-1-10

In 1997, CX284c was rated resistant to brown stem rot in a replicated field test in Dekalb County, IL. In this trial, known susceptible checks received susceptible ratings. This information confirmed field observations by company researchers from 1993 through 1997 as to the brown stem rot resistance of CX284c.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) DEKALB Genetics Corporation	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER EX728	3. VARIETY NAME CX284c
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 3100 Sycamore Road DeKalb, IL 60115 U.S.A.	5. TELEPHONE (include area code) (815) 758-3461	6. FAX (include area code) (815) 758-4106
7. PVPO NUMBER 9800247		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
10. Is the applicant the original owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following: a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country		
11. Additional explanation on ownership (if needed, use reverse for extra space):		

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

STD-470-E (07-97) (Destroy previous editions).

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